WATER RECLAMATION AND REUSE ADDENDUM TO AN APPLICATION FOR A VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT OR A VIRGINIA POLLUTION ABATEMENT PERMIT

A. Applicant Information

1. Name of Facility: _____
2. Facility Owner: _____
3. Owner's Mailing Address
   a. Street or P.O. Box _____
   b. City or Town _____ c. State ____ d. Zip Code _____
   e. Phone Number _____ f. Fax Number _____
   g. E-mail address _____
4. Facility Location: _____
   Street No., Route No., or Other Identifier

   _____
   County

   Latitude: _____ Longitude: _____
5. Is the operator of the facility also the owner? ___ Yes ___ No

   If No, complete A.6. and A.7.
6. Name of Operator: _____
7. Operator's Mailing Address
   a. Street or P.O. Box _____
   b. City or Town _____ c. State ____ d. Zip Code _____
   e. Phone Number _____ f. Fax Number _____
   g. E-mail address _____

B. Permitting Information

1. This addendum is for a <u>new</u> (check all that apply):

   ☐ Reclamation system.
   ☐ Satellite reclamation system.
   ☐ Reclaimed water distribution system.
   ☐ End user[1.].
   ☐ Not applicable. Proceed to B.2.

   a. Will the above new system or systems or end user be an expansion or modification[2.] to an existing permitted system or end user[1.]?

   ☐ No. Proceed to item B.3.
   ☐ Yes. Proceed to item B.2.

[1.] Refers specifically to an end user that receives reclaimed water from more than one reclamation system, satellite reclamation system, reclaimed water distribution system, or a combination thereof.

2. This addendum is for an existing (check all that apply):

☐ Reclamation system.
☐ Satellite reclamation system.
☐ Reclaimed water distribution system.
☐ End user[1].

a. Provide the following information for each existing system or end user[1]:

System or End User[1] Name	Type of current permit issued (VPDES or VPA)	Permit Number	Permit Expiration Date

b. List by name all existing permitted systems or end users[1] in B.2.a of the addendum to be expanded or modified[2].

_____

_____

3. For reclamation systems, satellite reclamation systems, reclaimed water distribution systems and end users[1] that are (i) new, (ii) existing but unpermitted, or (iii) existing, permitted and to be expanded or modified[2]:

a. Is or will there be any combination of the systems, end users[1], or wastewater treatment works under common ownership or management, including those physically separated from each other?

☐ No. Proceed to B.3.d.
☐ Yes. Provide the following information for all systems, end users[1] or wastewater treatment works under common ownership or management:

Designation of Facility*	Name of System, End User[1] or Wastewater Treatment Works	Name of Common Ownership or Management

* Designation of facility refers to reclamation system, satellite reclamation system, reclaimed water distribution system, end user[1] or wastewater treatment works.

1. Refers specifically to an end user that receives reclaimed water from more than one reclamation system, satellite reclamation system, reclaimed water distribution system, or a combination thereof.

2. For the purposes of this addendum, modification to an existing system (i.e., reclamation system, satellite reclamation system or reclaimed water distribution system) or end user[1] is any change to the facilities or reuses of that system or end user[1], respectively, warranting the inclusion of new reclaimed water standards, monitoring requirements or conditions in the permit currently issued to the existing system or end user[1].

b. Identify by name any combination of the systems (i.e., reclamation, satellite reclamation, reclaimed water distribution), end users[1.] or wastewater treatment works with common ownership or management listed in B.3.a. to be covered by one permit. (See addendum instructions)

_____

_____

c. Identify by name any of the systems, end users[1.] or wastewater treatment works with common ownership or management listed in B.3.a. to be covered by separate permits.

_____

_____

d. Will a wastewater treatment works, reclamation system, satellite reclamation system or reclaimed water distribution system provide reclaimed water to irrigate property under common ownership or management with that wastewater treatment works, reclamation system, satellite reclamation system or reclaimed water distribution system?

☐ No.
☐ Yes. Provide the following information

Name of Wastewater Treatment Works or System (Reclamation, Satellite Reclamation, Reclaimed Water Distribution)	**Location of Irrigation Property***

* Refers irrigation property to receive reclaimed water that is under common ownership or management with the named wastewater treatment works or system. (See addendum instructions)

e. Will a reclaimed water distribution system that receives reclaimed water from a reclamation system or satellite reclamation system under separate ownership from the reclaimed water distribution system, distribute reclaimed water to end users other than the owner or management of the reclaimed water distribution system?

☐ Yes.
☐ No.

If no, will there be {a service agreement established between the permittee of the reclamation system and the ownership or management of the reclaimed water distribution system}?

☐ Yes.
☐ No.

C. General Project Information (See addendum instructions)

For reclamation systems, satellite reclamation systems, and reclaimed water distribution systems, provide the following information. For projects that involve exclusively the distribution of reclaimed water, provide information for only items C.1., C.2., and C.5.

[1.] Refers specifically to an end user that receives reclaimed water from more than one reclamation system, satellite reclamation system, reclaimed water distribution system, or a combination thereof.

1. A description of the design and a site plan of each system. (See addendum instructions)

2. A general location map. (See addendum instructions)

3. Information regarding each wastewater treatment works that diverts or will divert effluent or source water to the reclamation system to be permitted.

a. Name of Wastewater Treatment Works	VPDES or VPA Permit No. of Facility	General VPDES Watershed Permit No.*

* Refers to a permit issued in accordance with the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia (9 VAC 25-820), and applies only to facilities with existing individual VPDES permits.

b. List all unit wastewater treatment processes used at each wastewater treatment works prior to diversion to the reclamation system.

_____

_____

_____

c. For only those wastewater treatment works listed in C.3.a with one or more significant industrial users (SIUs) indirectly discharging to the treatment works, provide the following information. (See addendum instructions)

Name of Wastewater Treatment Works	Name of All SIUs Indirectly Discharging to Each Wastewater Treatment Works	Approved Pretreatment Program (Yes/No/NA)*

* A pretreatment program applies only to VPDES permitted POTWs (publicly owned treatment works) with SIUs and may or may not be approved by the Department of Environmental Quality. "NA" means "not applicable".

d. Provide analyses of the effluent or source water to be diverted by each wastewater treatment works to the reclamation system. (See addendum instructions)

_____

_____

_____

4. Information regarding the sewage collections system that diverts or will divert sewage to the satellite reclamation system to be permitted.

a. The name of the sewage collection system and the owner of that system.

_____

_____

b. For the treatment works at the end of the sewage collection system that receives or will receive all remaining sewage, provide:

Name of the treatment works: _____

VPDES or VPA permit no.: _____

c. Provide the following information {for each SIU that discharges directly or indirectly to the sewage collection pipeline from which sewage or municipal wastewater is or will be diverted to the satellite reclamation system, excluding any downstream SIUs whose discharge has no potential to backflow to the satellite reclamation system intake}.

Name of SIU	**Location (Latitude & Longitude) of SIU**	**Distance Between SIU and Satellite Reclamation System***

* Distance along the length of the sewage collection system line or lines.

d. Provide concentrations of the following parameters for sewage or municipal wastewater to be diverted from the sewage collection system to the satellite reclamation system at the point of diversion. Analyses for other parameters may be provided, if available. Analyses of the sewage or municipal wastewater for pollutants of concern believed to be discharged by the SIUs identified in C.4.c may also be required. (See addendum instructions)

BOD_5 (mg/l) _____

TSS (mg/l) _____

Other (if available or required for SIU discharges): _____

_____

_____

_____

5. Information regarding the reclamation system or satellite reclamation system to be permitted.

a. Indicate if the system will reclaim industrial wastewater from an industrial facility: (See addendum instructions)

☐ For reuse on the same property as the industrial facility,
☐ For reuse off the property of the industrial facility.
☐ Both of the above.
☐ None of the above (not applicable).

b. Identify the quality of reclaimed water to be produced relative to the planned reuse or reuses of the reclaimed water: (See addendum instructions)

☐ Level 1
☐ Level 2
☐ Level 1 and Level 2
☐ Industrial (for reclamation of industrial wastewater)
☐ Unknown (for unlisted reuses)

c. List any other physical, chemical, and biological characteristics and constituent concentrations that may affect the intended reuse of the reclaimed water with respect to adverse impacts to public health or the environment.

_____

_____

_____

d. Indicate the design flow of the reclamation system or satellite reclamation system.

_____

6. For each proposed reuse of reclaimed water that is not listed in 9 VAC 25-740-90.A of the Water Reclamation and Reuse Regulation, provide the following information.

a. Describe the proposed reuse.

_____

_____

b. Describe any known risks of the proposed reuse to public health.

_____

_____

c. Describe the degree of public access and human exposure to reclaimed water that is or will be caused by the proposed reuse.

_____

_____

d. Indicate the reclaimed water treatment necessary to prevent nuisance conditions by the proposed reuse.

_____

_____

e. Describe the potential for improper or unintended use of reclaimed water resulting from the proposed reuse.

_____

_____

f. For new indirect potable reuse proposals, provide the following information:

(1) Name of the surface water to receive the reclamation system discharge and from which water will be withdrawn for potable water supply: (See addendum instructions)

_____

(2) Receiving water body type:

☐ Lake or pond
☐ River or stream

(3) Name of water treatment facility that will withdraw water for potable water supply:
_____

(4) Attach a map that shows the location of both the discharge from the reclamation system and the intake of the water treatment facility.

(5) Approximate the shortest distance by way of the surface water named in C.6.i(1) above, between the discharge of the reclamation system and the intake of the water treatment facility: _____(feet)

(6) Approximate the residence or transport time between the discharge of the reclamation system and the intake of the water treatment facility: _____

(7) Approximate the mixing ration of reclaimed water to ambient water at the intake of the water treatment facility: _____

D. Reclaimed water management (RWM) plan

1. For a reclamation system, satellite reclamation system or reclaimed water distribution system that provides or will provide reclaimed water directly to an end user or end users, including an end user that is also the applicant or permittee, submit a Reclaimed Water Management (RWM) plan to contain the following information. (See addendum instructions)

a. A description and map of the expected service area to be covered by the RWM plan for the term of the permit for the project.

b. A current inventory of impoundments, ponds or tanks that are used for system storage of reclaimed water and, as applicable, reject water storage under the control of the permittee, and non-system storage located within the service area of the RWM plan.

c. A water balance that accounts for the volumes of reclaimed water to be generated, stored, reused and discharged.

d. An example of service agreements or contracts to be established by the applicant or permittee with end users regarding implementation of and compliance with the RWM plan.

e. A description of monitoring of end users by the applicant or permittee to verify compliance with the terms of their agreements or contracts. Monitoring must include, at a minimum, metering the volume of reclaimed water consumed by end users.

f. An education and notification program.

g. A cross-connection and backflow prevention program.

2. Nutrient management plan (NMP) and site plan requirements for irrigation reuse of reclaimed water.

a. Do the reuse categories identified within the service area under D.1.a of the addendum include irrigation reuses of reclaimed water as follows? (See addendum instructions)

☐ Bulk irrigation.
☐ Non-bulk irrigation.
☐ There will be no irrigation reuses. (Proceed to E.)

b. Will the rate of all irrigation with reclaimed water within the service area of the RWM plan be supplemental?

☐ Yes.

☐ No. (Irrigation with reclaimed water at rates greater than supplemental will not be permitted as irrigation reuse, but may be permitted as land treatment in accordance with the Sewage Collection and Treatment Regulations, 9 VAC 25-790)

c. Indicate the concentration of total nitrogen (N) and total phosphorus (P) present or expected to be present in the reclaimed water for irrigation reuse:

☐ Annual average concentration of total N and total P greater than 8 mg/l and 1/mg/l, respectively (> Biological Nutrient Removal or BNR);

Or

☐ Annual average concentration of total N and total P less than or equal to 8 mg/l and 1/mg/l, respectively (≤ BNR).

d. For each irrigation property listed under B.3.d of this addendum that is a bulk irrigation reuse site, submit the following with the RWM plan: (See addendum instructions)

(1) A nutrient management plan if:

(a) The reclaimed water applied to the irrigation reuse site is > BNR (see D.2.c above), or

(b) Independent of the reclaimed water nutrient content and in addition to irrigation reuse (i) there is no option to dispose of the reclaimed water through a VPDES permitted discharge, or (ii) there is an option to dispose of the reclaimed water through a VPDES permitted discharge, but the VPDES permit does not allow discharge of the full nutrient load under design flow.

(2) A site plan.

e. For all non-bulk irrigation reuse of reclaimed water that is > BNR (see D.2.c above) within the service area specified in D.1.a, including each irrigation property listed under B.3.d that is a non-bulk irrigation reuse site, describe measures that are or will be implemented to manage nutrient loads from the non-bulk irrigation reuse. Attach additional information as needed. (See addendum instructions)

_____

_____

_____

_____

E. Certification Statement (See addendum instructions)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____ Date: _____

Signature: _____ Date: _____

Name of person(s) signing above (printed or typed):

_____

_____

Title(s) of person(s) signing above:

_____

_____

WATER RECLAMATION AND REUSE ADDENDUM TO AN APPLICATION FOR A VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT OR A VIRGINIA POLLUTION ABATEMENT PERMIT

ADDENDUM INSTRUCTIONS

WHO MUST COMPLETE THE ADDENDUM

Owners or operators of **new or existing unpermitted** reclamation systems, satellite reclamation systems, reclaimed water distribution systems or end users[1.,] must complete this addendum to submit with an application for either a Virginia Pollutant Discharge Elimination System (VPDES) permit or Virginia Pollution Abatement (VPA) permit.

Owners or operators of **existing permitted** reclamation systems, satellite reclamation systems, reclaimed water distribution systems, and end users[1.], must complete this addendum with the application to reissue a VPDES or VPA permit or independent of the permit application and for **only expansion or modification[2.] of the existing permitted facilities**.

WHERE TO FILE THE ADDENDUM

The completed addendum must be submitted to the DEQ regional office covering the area where the project is or will be located. DEQ regional office information can be found on the DEQ internet website at http://www.deq.virginia.gov/regions/homepage.html or can be obtained by calling the DEQ Central Office in Richmond, Virginia at (804)698-4000.

INSTRUCTIONS TO COMPLETE THE ADDENDUM

This addendum is to be submitted as part of a VPDES or VPA permit application or permit modification for water reclamation and reuse projects. Complete all items unless indicated otherwise, or enter "NA" for "not applicable". Requested information should be entered on the lines or spaces and in the boxes provided in the addendum, or as attachments to the addendum if needed.

Instructions are only provided for specific items contained in the addendum. Applicants will be referred to the instructions to complete these items by the notation "(See addendum instructions)".

Definitions for terms used in the addendum are available in 9 VAC 25-740-10 of the Water Reclamation and Reuse Regulation.

Note: Information required for Sections A, B, C and D of the addendum may be provided, in part, by referencing information previously submitted to the DEQ unless changes have occurred that require the submission of new or more current information.

1. Refers specifically to an end user or end users that receives reclaimed water from more than one reclamation system, satellite reclamation system, reclaimed water distribution system, or a combination thereof.

2. For the purposes of this addendum, modification to an existing system (i.e., reclamation system, satellite reclamation system or reclaimed water distribution system) or end user[1.] is any change to the facilities or reuses of that system or end user[1.], respectively, warranting the inclusion of new reclaimed water standards, monitoring requirements or conditions in the permit currently issued to the existing system or end user[1.]

B. Permitting Information

B.1.a., B.2.c and B.3 For the purposes of this addendum, modification to an existing system (i.e., reclamation system, satellite reclamation system or reclaimed water distribution system) or end user[1.] is any change to the facilities or reuses of that system or end user[1.], warranting the inclusion of new reclaimed water standards, monitoring requirements or conditions in the permit currently issued to the existing system or end user[1.].

B.3.b. An end user[1.] may be authorized under the permit issued to one of the reclamation systems, satellite reclamation systems, or reclaimed water distribution systems that supply reclaimed water to the end user provided the end user is under common ownership or management with the permitted system.

B.3.d. In the table under the column heading "Location of Irrigation Property", briefly describe the location of the irrigation property to receive reclaimed water that is under common ownership or management with the wastewater treatment works or system identified in the first column of the table on the same row. Also, identify the location of the irrigation property on a map to attach to the addendum or on the service area map in the Reclaimed Water Management plan described in D.1.a of the addendum.

C. General Project Information

C.1 For each reclamation system, satellite reclamation system, and reclaimed water distribution system, provide a design description and site plan showing operations and unit processes of the system, including and as applicable, treatment, storage, distribution, reuse and disposal facilities, and reliability features and controls. Wastewater treatment works, reclamation systems and reclaimed water distribution systems previously permitted need not be included unless they are directly tied into the new units or are critical to the understanding of the complete project.

For a reclamation system that receives source water from more than one wastewater treatment works, list all the unit treatment processes of only the reclamation system. For a satellite reclamation system or where a wastewater treatment works and a reclamation system are or will be one in the same facility and will be covered by a single VPDES or VPA permit, list all the unit treatment processes for the satellite reclamation system or combined wastewater treatment works and reclamation system.

C.2 For each reclamation system, satellite reclamation system, and reclaimed water distribution system, provide a general location map that shows the orientation of the system with reference to at least two geographic features (e.g., numbered roads, named streams or rivers, etc.). A general location map for a reclaimed water distribution system may be included in the map of the service area to be submitted in the Reclaimed Water Management (RWM) plan per D.1.a of the addendum instructions.

C.3.c For only those wastewater treatment works listed in C.3.a of the addendum with one or more significant industrial users (SIUs) indirectly discharging to the treatment works, list the name of the each wastewater treatment works, the names of all SIUs indirectly discharging to that wastewater treatment works, and indicate if the wastewater treatment works has an approved pretreatment program to manage pollutants of concern discharged by SIUs. Some of this information may be obtained from VPDES or VPA permit files or, if applicable, the pretreatment program files of some VPDES permitted facilities. For **only** a VPDES permitted publicly owned treatment works (POTW) with SIUs, this information is available on Form 2A, Part F of the VPDES permit application and in the pretreatment program file if the facility is also required to have a pretreatment program. For VPA permitted wastewater treatment works with SIUs, this information may be available under Form C, Part C-I or Form D, Part D-I of the VPA permit application. If permit or pretreatment program files are referenced, please verify that they actually contain the requested information before doing so. Additional references should be used to provide complete, current and accurate information.

Only VPDES permitted POTWs with SIUs may be required to have a pretreatment program and not all pretreatment programs are or will be approved. Information regarding the approval status of a pretreatment

[1.] Refers specifically to an end user that receives reclaimed water from more than one reclamation system, satellite reclamation system, reclaimed water distribution system, or a combination thereof.

program for a particular facility can be obtained from the DEQ Regional Office where the project is or will be located.

C.3.d (See application instructions for C.3.b above.) Provide analyses of the effluent or source water to be diverted by each wastewater treatment works to the reclamation system. Provide effluent analyses and data submitted with the application for either a VPDES permit in accordance with 9 VAC 25-31-100 or for a VPA permit application in accordance with 9 VAC 25-32-60 and VPA Permit Application Form C, Part C-I or Form D, Part D-IV, for each wastewater treatment works as applicable.

C.4.c {For each SIU that discharges directly or indirectly to the sewage collection pipeline from which sewage or municipal wastewater is or will be diverted to the satellite reclamation system, excluding any downstream SIUs whose discharge has no potential to backflow to the satellite reclamation system intake}, provide the name of the SIU, the location in terms of latitude and longitude of the SIU, and distance between the SIU and the satellite reclamation system along the sewage collection system line or lines.

For previously permitted satellite reclamation systems required to develop and maintain an inventory of SIUs in accordance with 9 VAC 25-740-150, it is acceptable to reference the existing inventory if it is current at the time of addendum submittal.

For new satellite reclamation systems to be permitted, some of the information may be obtained from the VPDES or VPA permit files or, if applicable, the pretreatment program files of a VPDES permitted treatment works at the end of the sewage collection system that receives or will receive all remaining sewage. For **only** a VPDES permitted POTW with SIUs, some information is available on Form 2A, Part F of the VPDES permit application and in the pretreatment program file if the facility is also required to have a pretreatment program. For VPA permitted wastewater treatment works with SIUs, this information may be available under Form C, Part C-I or Form D, Part D-I of the VPA permit application. If permit or pretreatment program files of the treatment works at the end of the sewage collection system are referenced, please verify that they actually contain the requested information before doing so. Additional references should be used to provide complete, current and accurate information regarding the SIUs, particularly for the location (latitude and longitude) and distance between each SIU and the satellite reclamation system.

C.4.d For all satellite reclamation systems, provide, at a minimum, the concentration of BOD_5 and Total Suspended Solids (TSS) in the municipal wastewater or sewage that is received by the satellite reclamation system from the sewage collection system. The BOD_5 and TSS concentrations should be based on either actual analyses or expected concentrations from a wastewater treatment design reference deemed acceptable by the DEQ, and should be representative of the municipal wastewater or sewage at the point of diversion from the sewage collection system to the satellite reclamation system. If other data regarding the characteristics of the municipal wastewater or sewage are available, this information may also be submitted.

For a satellite reclamation system with {SIUs that discharge directly or indirectly to the sewage collection pipeline from which sewage or municipal wastewater is or will be diverted to the satellite reclamation system, excluding any downstream SIUs whose discharge has no potential to backflow to the satellite reclamation system intake}, analyses of the sewage or municipal wastewater received by the satellite reclamation system from the sewage collection system may be required. The analyses for parameters in addition to BOD_5 and TSS will be based on pollutants of concern discharged by the SIUs.

C.5.a Check only one box that is most applicable to the reclamation system or satellite reclamation system to be permitted. For a satellite reclamation system that reclaims or will reclaim sewage or a reclamation system that reclaims or will reclaim only municipal wastewater or sewage, check the last box – "None of the above (not applicable)". Other categories with boxes are self-explanatory.

C.5.b Indicate the quality of reclaimed water to be produced relative to the planned reuse or reuses of the reclaimed water. Following the instructions below, check only one box that is most applicable to the reclamation system or satellite reclamation system to be permitted.

<u>Reclamation systems of municipal wastewater and satellite reclamation systems</u>

Step 1. For an existing or proposed reclamation system that reclaims or will reclaim municipal wastewater or a satellite reclamation system that reclaims or will reclaim sewage, refer to 9 VAC 25-740-70.A of the Water Reclamation and Reuse Regulation to determine which standards the system meets or will be capable of meeting. If the system is not capable of meeting standards for Level 2 at a minimum, it will not be eligible for reclamation and reuse.

Step 2. The reclaimed water standards to be included in the permit for the reclamation systems or satellite reclamation system will be determined by: (a) the treatment capabilities of the proposed or existing system, and (b) the existing or proposed reuses of reclaimed water produced by the system. Refer to 9 VAC 25-740-90.A of the Water Reclamation and Reuse Regulation to identify existing or planned reuses of reclaimed water from the reclamation system or satellite reclamation system and the minimum standard requirements, either Level 1 or Level 2, required for those reuses. If all reuses require Level 1 or a combination of Level 1 and Level 2, the reclamation system or satellite reclamation system must be capable of producing a minimum of Level 1 reclaimed water. If all reuses require Level 2, the reclamation system or satellite reclamation system must be capable of producing a minimum of Level 2 reclaimed water.

For any proposed or existing reuses **not** specifically listed in 9 VAC 25-740-90.A, it may be necessary to develop minimum standard requirements for reclaimed water on a case-by-case basis. In this situation, check "Unknown (for unlisted reuses)" for C.1.e(2) and complete C.1.f. of the addendum.

Step 3. Confirm that the treatment capabilities of the existing or proposed reclamation system or satellite reclamation system (Step 1) correspond with the appropriate minimum standard requirement (Level 1 or Level 2) for the existing or proposed reuses of reclaimed water from that system (Step 2). Where they correspond, check either Level 1 or Level 2, as applicable. In some cases, an existing or proposed reclamation system or satellite reclamation system has or will have the option to produce both Level 1 and Level 2 reclaimed water with separate storage and delivery to separate distribution systems for each of Level 1 and Level 2 reclaimed water. In this case, check the combination of Level 1 and Level 2, as applicable.

Where the treatment capabilities of the existing or proposed reclamation system or satellite reclamation system (Step 1) do not correspond with the appropriate minimum standard requirement (Level 1 or Level 2) for the existing or proposed reuses of reclaimed water from that system (Step 2), (i.e., the reuses require a minimum of Level 1 reclaimed water but the reclamation system or satellite reclamation system is only capable of producing Level 2 reclaimed water), the reuses must be limited to those that can accept Level 2 reclaimed water or the treatment capabilities of the system must be upgraded to produce Level 1 reclaimed water. If the reuses will be limited to correspond to the treatment capabilities of the reclamation system or satellite reclamation system, check the standards identified in Step 1 that can be met by the system (Level 1 or Level 2). If the reclamation system or satellite reclamation system will be modified or upgraded to meet the minimum standard requirement of the reuses identified in Step 2, check the appropriate minimum standard requirement (Level 1 or Level 2).

<u>Reclamation systems of industrial wastewater</u>
There are no specific standards for the reclamation of industrial wastewater. These are to be established on a case-by-case for each proposal to reclaim industrial wastewater. If the project involves the reclamation of industrial wastewater check "Industrial".

If the project involves the reclamation of industrial wastewater, which will not be distributed for reuses off the industrial site, the project <u>may</u> be excluded from the requirements of the Water Reclamation and Reuse Regulation (9 VAC 25-740-50.A). Please contact the DEQ Regional Office that covers the project location to determine whether or not a permit may be required.

C.6.f For new indirect potable reuse projects that are proposed after the effective date of the Water Reclamation and Reuse Regulation (9 VAC 25-740), provide the information requested for items C.6.f(1) through C.6.f(7). Associated with each indirect potable reuse project, there will be a potable water withdrawal by a water treatment plant located on the surface water to which the reclamation system will discharge. Enter the name of the water treatment plant for item C.6.f(3). The location information requested for item C.6.f(4), should be submitted on a USGS topographic map, preferably 7.5 minute series where available.

D. Reclaimed water management (RWM) plan.

D.1. A Reclaimed Water Management (RWM) plan is required for a reclamation system, satellite reclamation system or reclaimed water distribution system that provides reclaimed water directly to an end user or end users, including an end user that is also the applicant or permittee. Submit one RWM plan for each reclamation system, satellite reclamation system, reclaimed water distribution system or combination thereof, to be authorized by a separate permit.

Where the applicant or permittee is the {provider of reclaimed water} and the exclusive end user of {that} reclaimed water, submit information for only D.1.a, D.1.b and D.1.c.

D.1.a. The description and map of the area served reclaimed water by the provider (service area) must include existing and anticipated expansion of the service area that is likely to occur within the term of the permit to be issued (i.e., five years for a VPDES or ten years for a VPA permit). The map must identify all reuses according to reuse categories specified in 9 VAC 25-740-90.A of the Water Reclamation and Reuse Regulation (or other categories that may be developed for reuses that are identified and described in C.6 of the addendum) and their locations within the service area. The map must also identify and show the location of all public potable water supply wells and springs, and public water supply intakes, within the boundaries of the service area. If this addendum is to reissue a permit for existing systems that have been expanded or modified[2.] since the issuance or last reissuance of the permit, provide an updated description and map of the service area identifying any changes to the service area, if applicable.

Where the applicant or permittee is the provider of reclaimed water and a non-exclusive end user of that reclaimed water, the description and map of the service area must include property under common ownership or management with the applicant or permittee if the property is to receive reclaimed water for reuse from the applicant or permittee.

D.1.b. Submit a current inventory of reject water storage, system storage and non-system storage facilities located within the service area of the RWM plan. For a previously permitted reclamation system, satellite reclamation system or reclaimed water distribution system with an existing inventory, include any amendments to the inventory that have been made since the permit issuance or last permit reissuance for the system. The inventory must include the following:

1. Name or identifier for each storage facility,
2. Location of each storage facility (latitude and longitude),
3. Function of each storage facility (i.e., reject water storage, system storage or non-system storage),
4. Type of each storage facility (i.e., covered tank, uncovered tank, lined pond, unlined pond, etc.), and
5. Location (latitude and longitude) and distance of the nearest potable water supply well and spring, and public water supply intake, to each storage facility within 450 feet of that facility.

D.1.c. Submit a water balance that accounts for the volumes of reclaimed water to be:

1. Generated by the reclamation system or satellite reclamation system. This is assumed to be the design flow of the system.
2. Stored in reject water storage, system storage and non-system storage facilities. All storage facilities, including landscape impoundments used for non-system storage, can not discharge to surface waters of the state except in the event of a storm greater than the 25-year 24-hour storm.
3. Reused by reuse categories specified in D.1.a. of the addendum. The water balance must include projected volumes of seasonal and annual reclaimed water demand for each reuse category.
4. Discharged through a VPDES permitted outfall (for reclamation systems), back to a sewage collection system (for satellite reclamation systems), or otherwise disposed.

[2.] For the purposes of this addendum, modification to an existing system (i.e., reclamation system, satellite reclamation system or reclaimed water distribution system) or end user[1.] is any change to the facilities or reuses of that system or end user[1.], respectively, warranting the inclusion of new reclaimed water standards, monitoring requirements or conditions in the permit currently issued to the existing system or end user[1.]

D.1.d. Submit examples of a service agreements or contracts to be established between the provider of the reclaimed water and end users. More than one example service agreement or contract may be developed by a provider of reclaimed water for different end users or reuse categories. Each example service agreement or contract must contain, at a minimum, the following:

1. Prohibitions and requirements specified in 9 VAC 25-740-50.B and 9 VAC 25-740-170 that apply to the particular planned reuse of each end user.

2. A requirement for property owners to report all potable and non-potable water supply wells on their property to the provider of the reclaimed water and to comply with appropriate setback distances for wells where reclaimed water will be used on the same property.

3. A statement that the provider of reclaimed water shall also reserve the right to terminate the agreement and withdraw service for any failure by the end user to comply with the terms and conditions of the agreement or contract if corrective action for such failure is not taken by the end user.

4. Language explaining the proper use of reclaimed water by the end user for the purpose of managing nutrients from <u>non-bulk irrigation reuse</u> of reclaimed water that is > BNR (i.e., has an annual average concentration of total N and total P greater than 8 mg/l and 1/mg/l, respectively) within the service area specified in D.1.a of the addendum.

5. A requirement for the end user to submit the following for each <u>bulk irrigation reuse</u> site that is <u>not</u> under common ownership or management with the wastewater treatment works, reclamation system, satellite reclamation system or reclaimed water distribution system from which it receives reclaimed water for irrigation:

   (a) A nutrient management plan (NMP) for each irrigation reuse site that receives or will receive reclaimed water that is > BNR (i.e., has an annual average concentration of total N and total P greater than 8 mg/l and 1/mg/l, respectively). The NMP must be prepared by a nutrient management planner certified by the Department of Conservation and Recreation (DCR) and must be current in accordance with the Nutrient Management Training and Certification Regulations, 4 VAC 5-15-10 et seq.

   (b) A site plan as described under D.2.d(2) of the addendum instructions.

D.1.e. Describe how end users will be monitored via metering of reclaimed water consumed and other means to verify compliance with the terms of their service agreements or contracts with the provider of reclaimed water. Other means of monitoring may include periodic, random inspection of end user facilities and records related to reclaimed water reuse.

D.1.f. Submit an education and notification (E&N) program only if reuses of reclaimed water within the service area will:

- Require Level 1 reclaimed water,
- Be in areas accessible to the public, **or**
- Are likely to have human contact.

The E&N program has separate components for education and notification. For the education component, the E&N program must contain, at a minimum, the following:

1. Information to be provided to end users and the public likely to have contact with reclaimed water, regarding the origin, nature, and characteristics of the reclaimed water; the manner in which the reclaimed water can be used safely; and uses for which the reclaimed water is prohibited or limited.

2. A description of all modes of communication to be used for education and distribution of information, including, but not limited to, meetings, distribution of written information, the news media (i.e., news papers, radio, television or the internet), and advisory signs as described in 9 VAC 25-740-160.

3. A description and schedule of educational activities for individual end users. End users must receive program education at the time of their initial connection to the reclaimed water distribution system. For non-bulk irrigation end users of reclaimed water > BNR (i.e., reclaimed water having an annual average

concentration of total N and total P greater than 8 mg/l and 1/mg/l, respectively), program education must be provided at least annually.

The notification component of the E&N program must contain procedures to notify end users and the affected public of treatment failures at the reclamation system that:

1. Can adversely impact human health, or
2. Result in loss of reclaimed water service.

At a minimum, notification procedures described in 9 VAC 25-740-170.A.2 must be included in the E&N program.

D.1.g. Submit a cross-connection and backflow prevention program that:

1. Evaluates the potential for cross-connections of the reclaimed water distribution system to a potable water system and backflow to the reclaimed water distribution system from industrial end users,

2. Evaluates the public health risks associated with possible backflow from industrial end users,

3. Describes inspections to be performed by the owner or management of the reclaimed water distribution system at the time end users connect to the system and periodically thereafter to prevent cross-connections to a potable water system and backflow from industrial end users as determined necessary through the program evaluation{, and}

{4. Insures that cross-connection and backflow prevention design criteria specified in 9 VAC 25-740-110.B for reclaimed water distribution systems are implemented.}

Note: A backflow prevention device is required on the reclaimed water service connection to an industrial end user, unless evaluation by the cross-connection and backflow prevention program determines that there is minimal risk to public health associated with possible backflow from the industrial end user or that there will be no backflow from the industrial end user capable of contaminating the reclaimed water supply.

D.2.a. Check all boxes that apply. If none of the reuse categories identified within the service area of the RWM plan include irrigation reuses of reclaimed water (see D.1.a. of addendum instructions), proceed to E. of the addendum.

D.2.d. Where the treatment works or system to be permitted and the property to which the system distributes or will distribute reclaimed water for <u>bulk irrigation reuse</u> are identified in B.3.d of the addendum, submit the following with the RWM plan (see D.1 of the addendum instructions):

(1) A nutrient management plan (NMP) for each of the bulk irrigation reuse site if:

(a) The reclaimed water applied to the irrigation reuse site is > BNR (i.e., has an annual average concentration of total N and total P greater than 8 mg/l and 1/mg/l, respectively). The NMP must be prepared by a nutrient management planner certified by the Department of Conservation and Recreation (DCR) and must be current in accordance with the Nutrient Management Training and Certification Regulations, 4 VAC 5-15-10 et seq.

Or

(b) Independent of the reclaimed water nutrient content and in addition to irrigation reuse (i) there is no option to dispose of the reclaimed water through a VPDES permitted discharge, or (ii) there is an option to dispose of the reclaimed water through a VPDES permitted discharge, but the VPDES permit does not allow discharge of the full nutrient load under design flow. The latter would typically, but not exclusively, apply to a treatment works with a VPDES permitted discharge, implementing water reclamation and reuse in lieu of providing treatment to meet nutrient effluent limits at design flow.

The NMP required per D.2.d(1)(b) must be prepared as specified in D.2.d(1)(a) of the addendum instructions and be <u>approved by the DCR</u> prior to submission with the RWM plan.

(2) A site plan displayed on the most current USGS topographic maps (7.5 minutes series, where available) and showing the following:

(a) The boundaries of the irrigation site;

(b) The location of the following within 250 feet of the irrigation site:

- all potable and non-potable water supply wells and springs, public water supply intakes
- occupied dwellings
- property lines
- areas accessible to the public
- outdoor eating, drinking and bathing facilities
- Surface waters, including wetlands
- Limestone rock outcrops and sinkholes

(c) Setbacks areas around the irrigation site in accordance with 9 VAC 25-740-170.

Where expansion of an existing irrigation site is anticipated, provide the same information in the site plan for the area of proposed expansion.

D.2.e. For non-bulk irrigation reuse of reclaimed water that is > BNR (i.e., has an annual average concentration of total N and total P greater than 8 mg/l and 1/mg/l, respectively), a NMP will not be required. However, the RWM plan must describe other measures to be implemented by the applicant or permittee to manage nutrient loads by non-bulk irrigation reuse of reclaimed water that is > BNR within the service area specified in D.1.a. The service area includes irrigation property under common ownership or management with the applicant or permittee listed under B.3.d of the addendum that is used for non-bulk irrigation reuse.

Other measures to manage nutrient loads by non-bulk irrigation reuse of reclaimed water that is > BNR must include, but are not limited to the following:

(1) Reclaimed water metering of individual non-bulk irrigation end users;

(2) Routine distribution of literature not less than annually, to individual non-bulk irrigation end users addressing the proper use of reclaimed water for irrigation in accordance with 9 VAC 25-740-170.A (applicable only to reuses that require Level 1 reclaimed water, will be in areas accessible to the public, or are likely to have human contact); and

(3) Monthly monitoring of N and P loads by non-bulk irrigation reuses to the service area of the RWM plan based on the total monthly metered use of reclaimed water for the service area and the monthly average concentrations of total N and total P in the reclaimed water.

E. Certification Statement

To complete the Water Reclamation and Reuse Addendum for the application of either a Virginia Pollutant Discharge Elimination System (VPDES) permit or a Virginia Pollution Abatement (VPA) permit, section E. of the addendum must be completed by the appropriate signatory authority specified in 9 VAC 25-31-110 of the VPDES Permit Regulation or 9 VAC 25-32-70 of the VPA Permit Regulation.

NOTE: Items within "{ }" are not contained in the draft Water Reclamation and Reuse Regulation (9 VAC 25-740-10 et seq.), but are intended for inclusion in the final regulation.